



System-of-Care Evaluation Brief

Measuring and Evaluating Change

In the national evaluation of the Comprehensive Community Mental Health Services for Children and Their Families Program, a significant amount of information is collected to evaluate change across time. Children and families participate in comprehensive surveys at intake and every six months thereafter to obtain a wide range of information that assists in evaluating outcomes. This includes collecting information on community indicators such as functioning in school (e.g., attendance, grades, special services and placements), functioning in the community (e.g., law enforcement contacts), living arrangements, and functioning in the home. In addition, clinical measures are administered to obtain an assessment of children's characteristics when they enter systems of care and to track changes across time.

Establishing an agreed-upon and understandable method for categorizing individual change is not a magical solution to all problems confronting the evaluation of systems of care. Rather, it represents an opportunity to begin to examine outcomes on clinical measures in a different way that may help us to identify and further understand both our successes and our failures in system of care programs for children with serious emotional disturbance and their families.

Describing changes in clinical indicators that make sense to multiple stakeholders is challenging. A number of issues with our existing measurement systems contribute to the challenge. For example, the primary clinical outcome measures used in the national evaluation (e.g., Child Behavior Checklist, Youth Self-Report, Child and Adolescent Functional Assessment Scale) focus on negative behaviors, and the scores that they produce are difficult to understand for those without a mental health or statistical background. These measures were chosen for good reasons several years ago and their use makes sense to researchers, but changes in numerical scores on these measures, no matter how statistically valid, can be relatively meaningless to policymakers, families, and program personnel.

System-of-Care Evaluation Briefs report findings from the National Evaluation of the Comprehensive Community Mental Health Services for Children and Their Families Program funded by the Center for Mental Health Services (CMHS) of the Substance Abuse and Mental Health Services Administration. The Program provides six-year grants to states, political subdivisions of states, American Indian Tribes, tribal organizations, and territories to support the development of community-based systems of care for children with serious emotional disturbance and their families. Systems of care are developed using an approach that emphasizes integration of services through collaborative arrangements between child-serving sectors such as education, child welfare, juvenile justice, and mental health; youth and family caregiver participation; and cultural and linguistic competence of services. The Briefs are published monthly and are sponsored by the Child, Adolescent and Family Branch of the federal Center for Mental Health Services.



National Evaluation
Comprehensive Community Mental Health
Services for Children and Their Families Program

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The Reliable Change Index

The Reliable Change Index (RCI) (Jacobson & Truax, 1991) is an analysis procedure that establishes a metric for describing change on a clinical measure. Basically, RCIs allow us to understand how much change from an initial point in time to a second point in time (on a measure) is meaningful and reliable in either a positive or negative direction. Once we know how much change is enough change, we can describe individuals as those who change in a positive direction, those who remain stable, and those who experience negative change. These simple percentages, which convey important information about children's clinical status as they participate in systems of care, are easy to comprehend by multiple audiences as well as to compare across measures (for more complex statistical needs).

Child and Family Outcomes Study

Changes on the Child Behavior Checklist from Intake to 12 Months (N=2885)

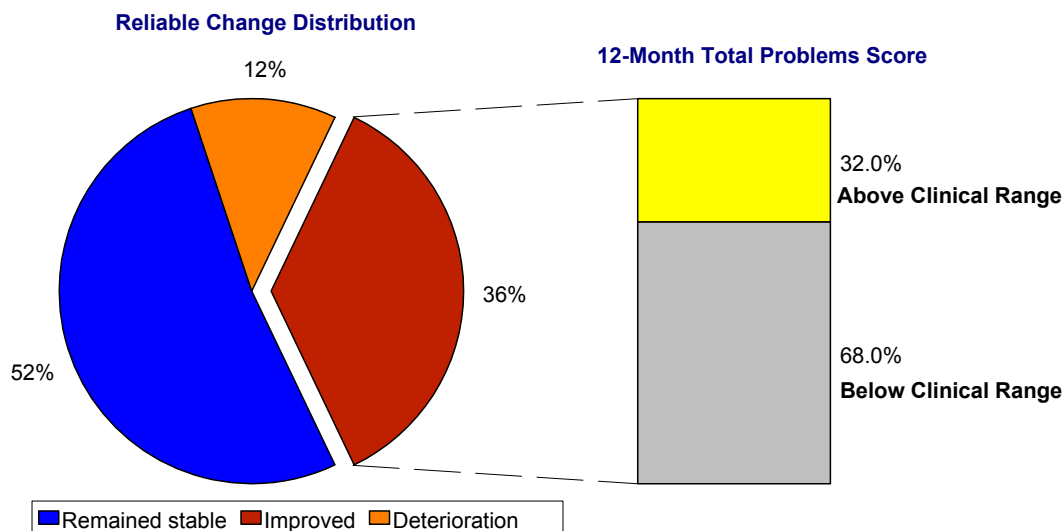


Figure 1

An example of this is shown in Figure 1. Of the 2,885 children and adolescents who continued to participate in the evaluation at the 12-month mark, 36 percent displayed clinically significant improvement in parent-rated behavioral and emotional problem areas. Sixty-eight percent of the children who displayed these improvements were rated below the clinical range at 12 months, a 42 percent improvement from intake. These children also displayed an overall improvement in functional impairment with over 73 percent rated in the mild to moderate range at 12 months, a 24 percent improvement from intake.

Similarly, as shown in Figure 2, 36 percent of the 1,298 teenagers continuing to participate in the evaluation at 12 months displayed clinically significant improvement in self-rated behavioral and emotional problems. Ninety-two percent of the youth who displayed these improvements were rated below the clinical range at 12 months, a 52 percent improvement from intake. These youth also displayed an overall improvement in functional impairment with 69 percent rated in the mild to moderate ranges at 12 months, a 24 percent improvement.

Child and Family Outcomes Study

Changes on the Youth Self Report from Intake to 12 Months (N=1298)

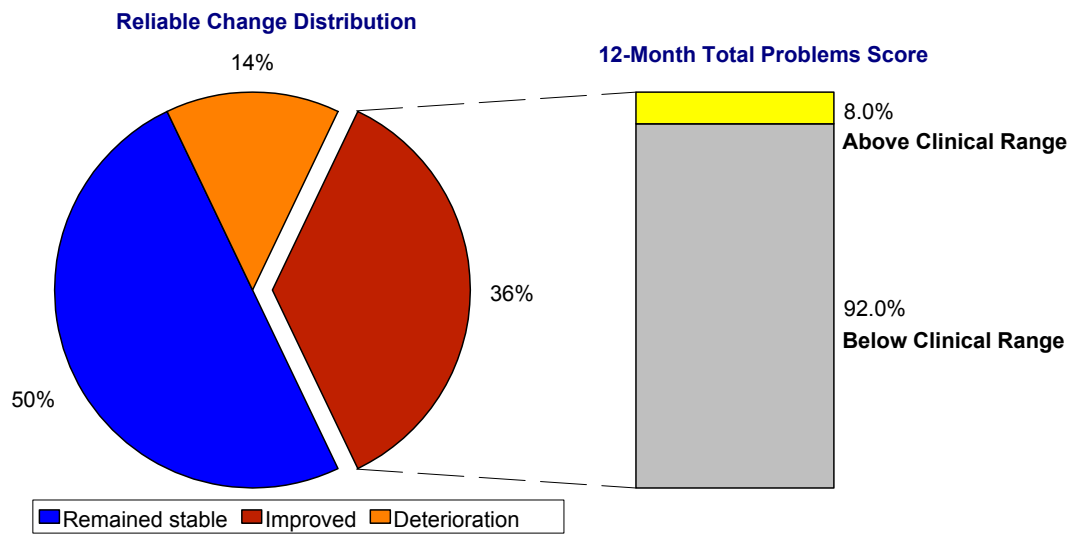


Figure 2

An important question to ask is, "Do improvements across one year of participation in systems of care differ for subgroups of children?" The answer is, improvement rates are similar for different mental health diagnoses, but different based on age, sex, and referral source. Adolescents are slightly more likely to deteriorate than younger children. Although improvement rates are similar for boys and girls, boys who improve are more likely to be rated below the clinical range at one year than girls. The highest rates of improvement were shown by children referred by their parents or the schools, while the lowest improvement rate was shown by children referred by social service agencies.

Reference:

Jacobson, N. S., & Truax, P. (1991). Clinical significance: A statistical approach to defining meaningful change in psychotherapy research. *Journal of Consulting and Clinical Psychology, 59*, 12-19.

*How much change is enough change
to improve the quality of life and
developmental outcomes for children
with serious emotional disturbance
and their families?*



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